

The listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of transmitting an amplified RF signal comprising:  
providing a lookup table (LUT) for storing of predistortion data;  
providing a power amplifier circuit for receiving a first analog RF signal and for providing  
the amplified RF signal therefrom;  
receiving a digital modulated signal;  
indexing the LUT to provide indexed predistortion data;  
predistorting the digital modulated signal in dependence upon the indexed predistortion  
data to form a predistorted digital modulated signal;  
converting the predistorted digital modulated signal into an analog modulated signal;  
amplifying the analog modulated signal using the power amplifier to form the amplified  
RF signal;  
sampling a portion of the amplified RF signal; and,  
varying the index within the LUT that is used for indexing of the predistortion data stored  
therein for other than continuously changing the predistortion data that is used for  
predistorting of the digital modulated signal in dependence upon the sampled amplified RF  
signal.

2. (original) A method according to claim 1 comprising:  
providing a digital signal having a first predetermined symbol pattern concurrently with  
the digital modulated signal;  
sampling a pre-defined portion of the amplified RF signal;  
extracting a second predetermined symbol pattern from the amplified RF signal;  
comparing the second predetermined symbol pattern to the first predetermined symbol  
pattern; and,  
varying the index within the LUT in dependence the comparison.

3. (previously presented) A method according to claim 1 wherein the predistortion data is varied in dependence upon at least one of a temperature of the power amplifier and supply voltage and output load.

4. (previously presented) A method according to claim 1 wherein sampling the portion of the amplified RF signal comprises:

providing an amplitude detector with a predetermined dynamic range corresponding to higher amplitudes of the amplified RF signal in order to provide the sampling for varying the index within the LUT.

5. (original) A method according to claim 4 comprising:

detecting with the amplitude detector the magnitude of the amplified RF signal;  
determining an index within the LUT corresponding to a predistortion data for predistorting the digital modulated signal to correct the sampled amplified RF signal; and feeding the determined index back to the LUT in order to effect the predistortion of the digital modulated signal to correct the sampled amplified RF signal.

6. (previously presented) A method according to claim 2 comprising:

varying the index within the LUT until the difference between the second predetermined symbol pattern and the first predetermined symbol pattern are approximately minimized.

7. (original) A method according to claim 4 comprising:

detecting with the amplitude detector the magnitude of the amplified RF signal;  
providing a predetermined relationship between a magnitude and phase response of the power amplifier circuit;  
determining a phase of the amplified RF signal in dependence upon the predetermined relationship; and,  
varying the index within the LUT in dependence upon the determined amplitude and phase of the amplified RF signal.

8. (previously presented) A method according to claim 1 wherein sampling the portion of the amplified RF signal comprises:

providing a receiver circuit with a quadrature down-conversion mixer;  
quadrature sampling of the amplified RF signal with the receiver circuit; and,  
detecting an amplitude and phase of the amplified RF signal.

9. (previously presented) A method according to claim 8 wherein the receiver circuit is a same receiver circuit used within a receive path of a transceiver system.

10. (previously presented) A method according to any of claim 1 comprising:  
determining an index within the LUT corresponding to a predistortion data for predistorting the digital modulated signal to correct the amplitude and phase of the sampled amplified RF signal;  
varying the index within the LUT in dependence upon the determined amplitude and phase of the sampled amplified RF signal.

11. (previously presented) A method according to claim 2 wherein the predistortion data is varied in dependence upon at least one of a temperature of the power amplifier and supply voltage and output load.

12. (previously presented) A method according to claim 3 comprising:  
varying the index within the LUT until the difference between the second predetermined symbol pattern and the first predetermined symbol pattern are approximately minimized.

13. (previously presented) A method according to claim 4 comprising:  
varying the index within the LUT until the difference between the second predetermined symbol pattern and the first predetermined symbol pattern are approximately minimized.

14. (previously presented) A method according to claim 2 wherein sampling the portion of the amplified RF signal comprises:

providing an amplitude detector with a predetermined dynamic range corresponding to higher amplitudes of the amplified RF signal in order to provide the sampling for varying the index within the LUT.

15. (previously presented) A method according to claim 14 comprising:  
detecting with the amplitude detector the magnitude of the amplified RF signal;  
providing a predetermined relationship between a magnitude and phase response of the power amplifier circuit;  
determining a phase of the amplified RF signal in dependence upon the predetermined relationship; and,  
varying the index within the LUT in dependence upon the determined amplitude and phase of the amplified RF signal.

16. (previously presented) A method according to claim 3 wherein sampling the portion of the amplified RF signal comprises:  
providing a receiver circuit with a quadrature down-conversion mixer;  
quadrature sampling of the amplified RF signal with the receiver circuit; and,  
detecting an amplitude and phase of the amplified RF signal.

17. (previously presented) A method according to claim 1 comprising  
providing a receiver circuit and,  
wherein the receiver circuit is a same receiver circuit used within a receive path of a transceiver system.

18. (previously presented) A method according to claim 2 comprising:  
determining an index within the LUT corresponding to a predistortion data for predistorting the digital modulated signal to correct the amplitude and phase of the sampled amplified RF signal;  
varying the index within the LUT in dependence upon the determined amplitude and phase of the sampled amplified RF signal.

19. (previously presented) A method according to claim 3 comprising:  
determining an index within the LUT corresponding to a predistortion data for predistorting  
the digital modulated signal to correct the amplitude and phase of the sampled amplified  
RF signal;

varying the index within the LUT in dependence upon the determined amplitude and phase  
of the sampled amplified RF signal.

20. (previously presented) A method according to claim 8 comprising:  
determining an index within the LUT corresponding to a predistortion data for predistorting  
the digital modulated signal to correct the amplitude and phase of the sampled amplified  
RF signal;

varying the index within the LUT in dependence upon the determined amplitude and phase  
of the sampled amplified RF signal.